IN THE CLAIMS:

Please amend the claim as follows:

1. (Currently Amended) A wavelength division multiplexing (WDM) light source, comprising:

a Fabry-Perot laser for receiving spectrum-spliced incoherent light to amplify and output only an oscillation mode matching with a wavelength of the injected light; ~~and~~

a bias controlling unit for limiting a current supplied to the Fabry-Perot laser to a bias current, wherein the bias current has a value adjacent to a threshold current of the Fabry-Perot laser, and wherein the value of the threshold current changes according to temperature of the Fabry-Perot laser and according to relationship between the injected light, which changes depending on the temperature of the Fabry-Perot laser, and a wavelength of the oscillation mode, wherein said bias controlling unit further comprises:

a threshold current sensor for sensing the threshold current of the Fabry-Perot laser, wherein the threshold current sensor includes an impedance sensor for sensing the threshold current of the Fabry-Perot laser based on a change of impedance of the Fabry-Perot laser; and

a bias controller for adjusting the bias current supplied to the Fabry-Perot laser depending on the sensed threshold current.

2. (Canceled)

3. (Original) A WDM light source according to claim 1, wherein the bias controlling unit controls the bias current supplied to the Fabry-Perot laser to have a value between at least one

half and at most one and half of the threshold current of the Fabry-Perot laser.

4. (Currently Amended) A WDM light source according to claim ~~2~~1, wherein the threshold current sensor includes an optical power sensor for sensing the threshold current of the Fabry-Perot laser based on a change of optical power of the Fabry-Perot laser.

5. (Canceled)

6. (Currently Amended) A WDM light source according to claim ~~2~~1, wherein the threshold current sensor includes both a temperature sensor for sensing a working temperature of the Fabry-Perot laser and a lookup table.

7. (Currently Amended) A wavelength division multiplexing (WDM) light source comprising:

a light source;

a Fabry-Perot laser for suppressing an oscillation mode mismatched with a wavelength of injected light and for amplifying and outputting only an oscillation mode matching with the wavelength of the injected light;

a wavelength division multiplexer for spectrum-splicing light, which is generated from the light source, to provide the spectrum-spliced light to the Fabry-Perot laser as injecting light, and for multiplexing a wavelength-locked signal wavelength-locked by the Fabry-Perot laser;

a circulator for inputting the light generated from the light source into the wavelength division multiplexer, and for outputting a multiplexed signal multiplexed by the wavelength

division multiplexer to a transmission link;

a threshold current sensor for sensing a threshold current of the Fabry-Perot laser, whose threshold current is changed according to a temperature, wherein the threshold current sensor includes both a temperature sensor for sensing a working temperature of the Fabry-Perot laser and a lookup table.

a bias controlling unit for limiting current supplied to the Fabry-Perot laser to a bias current, wherein the bias current has a value adjacent to the threshold current according to the sensed threshold current.

8. (Currently Amended) A method for maintaining wavelength-locking of a Fabry-Perot laser regardless of a change of external temperature, the method comprising the steps of:

(a) measuring a threshold current of the Fabry-Perot laser, whose threshold current is changed according to a temperature and a relationship between injected light changed depending to a temperature and a wavelength of oscillation mode;

(b) limiting a current supplied to the Fabry-Perot laser to a bias current, the bias current having a value adjacent to the threshold current of the Fabry-Perot laser; ~~and~~

(c) injecting spectrum-spliced incoherent light into the Fabry-Perot laser;~~.~~

(d) providing a threshold current sensor for sensing the threshold current of the Fabry-Perot laser, wherein the threshold current sensor includes an impedance sensor for sensing the threshold current of the Fabry-Perot laser based on a change of impedance of the Fabry-Perot laser; and

(e) providing a bias controller for adjusting the bias current supplied to the Fabry-Perot

laser depending on the sensed threshold current.

9. (Original) A method according to claim 8, wherein the bias current supplied to the Fabry-Perot laser has a value between at least one half and at most one and half of the threshold current of the Fabry-Perot laser.

10. (Original) A method according to claim 8, wherein step a is carried out by measuring a change of optical power of the Fabry-Perot laser.

11. (Original) A method according to claim 8, wherein step a is carried out by measuring a change of impedance of the Fabry-Perot laser.

12. (Currently Amended) A method for maintaining wavelength-locking of a Fabry-Perot laser regardless of a change of external temperature, the method comprising the steps of:

(a) measuring a threshold current of the Fabry-Perot laser, whose threshold current is changed according to various temperatures and according to a relationship between injected light changed depending to a temperature and a wavelength of oscillation mode;

(b) converting the temperature and the threshold current corresponding to the temperature into data and for storing the data;

(c) measuring a working temperature of the Fabry-Perot laser;

(d) limiting a current supplied to the Fabry-Perot laser to a bias current that is generated using the stored data, the bias current having a value adjacent to a threshold current corresponding to the working temperature of the Fabry-Perot laser; ~~and~~

(e) injecting spectrum-spliced incoherent light into the Fabry-Perot laser;.

(d) providing a threshold current sensor for sensing the threshold current of the Fabry-Perot laser, wherein the threshold current sensor includes an impedance sensor for sensing the threshold current of the Fabry-Perot laser based on a change of impedance of the Fabry-Perot laser; and

(e) providing a bias controller for adjusting the bias current supplied to the Fabry-Perot laser depending on the sensed threshold current.

13. (Original) A method according to claim 12, wherein the bias current supplied to the Fabry-Perot laser has a value between at least one half and at most one and half of the threshold current of the Fabry-Perot laser.